

Appl. No. : 10/685,068
Filed : October 14, 2003

REMARKS

The Applicants thank the Examiner for his careful and thoughtful examination of the present application. By way of summary, Claims 1-26 were pending in this application; Claims 19, 20, and 25 having been withdrawn. In the present amendment, the Applicants have canceled Claims 7-11, 23 and 24 without prejudice or disclaimer, amended Claims 1, 3, 5, 18, 21, and 26, and added new Claims 27-29. Accordingly, Claims 1-6, 12-18 and 21, 22, and 26-29 remain pending for consideration.

Allowable Subject Matter - Claims 8, 10, 11, and 13-17

The Applicants also thank the Examiner for the indication of allowable subject matter in Claims 8, 10, 11, and 13-17. Pursuant to the Office Action, the Applicants have rewritten Claims 8 and 10 into independent form as new Claims 28 and 29, which include all of the limitations of the corresponding base claim and any intervening claims. Accordingly, the Applicants respectfully submit that new Claims 28 and 29 are now in condition for allowance.

In addition, pursuant to the Office Action, the Applicants have amended Claim 1 to include all of the limitations of Claim 11. Accordingly, the Applicants respectfully submit that amended Claim 1 is now in condition for allowance.

Claims 2-6 and 12 depend directly from Claim 1, and are therefore allowable for the same reasons. In addition, Claims 2-6 and 12 are allowable for the unique features described therein.

The Applicants also thank the Examiner for the indication of allowable subject matter in Claims 13-17.

Examiner's Statement of Reasons for Allowance

The Applicants respectfully disagree with the Examiner's Statement of Reasons for Allowance to the extent that not all the claims include each of the structures or method steps recited in the Examiner's Statement. Also, to the extent that there is any implication that the patentability of any claim rests on the recitation of a single feature, the Applicants respectfully disagree with the Examiner's Statement because it is the combination of features recited in each claim that makes that claim patentable.

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Objection to Claim 5

The Office Action objected to Claim 5 for minor informalities. In particular, the Office Action objected to Claim 5 as being redundant. Claim 5 has been amended to eliminate the alleged redundancy. Accordingly, the Applicants respectfully request withdrawal of the objection to Claim 5.

Rejection of Claims 21 and 22 under 35 U.S.C. § 101

The Office Action rejected Claims 21 and 22 under 35 U.S.C. § 101 as being directed to non-statutory subject matter. According to the Office Action, Claim 21 positively recites the measurement site, which is part of the human body.

Pursuant to the Office Action's instructions, Claim 21 has been amended to recite that the elements are adapted to be between the pressure application device and the measurement site. Claim 22 depends directly from Claim 21. Therefore, the Applicants respectfully request withdrawal of the rejection of Claims 21 and 22 under 35 U.S.C. § 101.

Rejection Of Claim 3 Under 35 U.S.C. § 112, ¶ 1

The Office Action rejected Claim 3 under 35 U.S.C. § 112, ¶ 1, as allegedly failing to comply with the enablement requirement. Specifically, the Office Action asserted that the claim contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention of Claim 3.

Claim 3 has been amended to eliminate the basis for the foregoing rejection. Therefore, the Applicants respectfully request withdrawal of the rejection of Claim 3 under 35 U.S.C. § 112, ¶ 1.

Rejection Of Claims 1, 2, 4, 6, 7, 18, and 21-23 Under 35 U.S.C. § 102

The Office Action rejected Claims 1, 2, 4, 6, 7, 18, and 21-23 under 35 U.S.C. § 102 as being anticipated by U.S. patent no. 3,095,872, issued to Tolles, (the Tolles patent). The Applicants respectfully traverse this rejection because the Tolles patent fails to identically teach every element of the claim. See M.P.E.P. § 2131 (stating that

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in order to anticipate a claim, a prior art reference must identically teach every element of the claim).

As discussed above, Claim 1 has been amended to include all of the limitations of allowable Claim 11. Therefore, Applicants respectfully submit that Claim 1 is patentable over the cited art.

Claims 2, 4, and 6 depend from Claim 1, and are therefore patentable for these reasons as well. In addition, Claims 2, 4, and 6 are patentable for the unique features described therein.

Claim 18 has been amended to include, inter alia, a measurement device comprising a device, which perturbs at least one of pressure and volume of an artery of a patient, and a pressure transducer placed sufficiently near a measurement site to detect a signal indicative of an oscillation response when the device perturbs the at least one of pressure and volume, wherein the measurement device is in communication with a processor, which determines when an amplitude of the signal is greatest, thereby determining the time when transmural pressure is approximately equal to zero.

In contrast, Tolles fails to teach, inter alia, a measurement device comprising a device and a pressure transducer, wherein the measurement device is in communication with a processor, which determines when an amplitude of the signal is greatest, thereby determining the time when transmural pressure is approximately equal to zero.

Since Tolles fails to identically teach every element of Claim 18, Claim 18 is patentable over the cited art. Therefore, the Applicants respectfully request the withdrawal of the rejection of Claim 18 under 35 U.S.C. § 102.

Claim 21 has been amended to include, inter alia, a measurement device comprising an exciter, which induces a pressure oscillation along an artery, and a detector, which senses the pressure oscillation, wherein the measurement device is in communication with a processor, which determines a time when an amplitude of the signal is greatest, and determines the blood pressure based at least in part upon the time.

In contrast, Tolles fails to teach, inter alia, a measurement device comprising an exciter and a detector, wherein the measurement device is in communication with a

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processor, which determines a time when an amplitude of the signal is greatest, and determines the blood pressure based at least in part upon the time.

Since Tolles fails to identically teach every element of Claim 21, Claim 21 is patentable over the cited art. Therefore, the Applicants respectfully request the withdrawal of the rejection of Claim 21 under 35 U.S.C. § 102.

Claim 22 depends directly from Claim 21. Therefore, Claim 22 is patentable over the cited art for these reasons as well. In addition, Claim 22 is patentable for the unique features recited therein.

Rejection Of Claims 3, 5, 9, and 12 Under 35 U.S.C. § 103

The Office Action rejected Claims 3, 5, and 9 under 35 U.S.C. § 103 as being unpatentable over Tolles, and Claim 12 as being unpatentable over Tolles in view of U.S. patent no. 5,590,649 to Caro, et al. (the Caro patent). The Applicants respectfully traverse this rejection for the following reasons.

Claims 3, 5, 9, and 12 depend directly from Claim 1, which has been amended to include all of the limitations of allowable Claim 11. Therefore, Claims 3, 5, 9, and 12 are allowable over the cited art. Applicants respectfully request withdrawal of the rejection of Claims 3, 5, and 9 under 35 U.S.C. § 103.

Rejection Of Claim 26 Under 35 U.S.C. § 103

The Office Action rejected Claim 26 under 35 U.S.C. § 103 as being unpatentable over U.S. patent no. 4,349,034 to Ramsey III, et al. (the Ramsey patent) in view of U.S. patent no. 5,485,149 to Chang, et al. (the Chang patent). The Applicants respectfully traverse this rejection for the following reasons.

Claim 26 has been amended to recite, inter alia, a method of determining blood pressure of a patient, comprising providing a range of pressures to an artery; providing an oscillating signal to the artery; measuring a signal indicative of the oscillating signal and at least one pressure within the range of pressures; filtering the signal indicative of the oscillating signal and at least one pressure within the range of pressures to produce a filtered signal, wherein the filtered signal comprises an amplitude; determining a point of zero transmural pressure when the amplitude of the filtered signal is at maximum;

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and determining a pressure within the range in pressures based at least in part from said point of zero transmural pressure.

In contrast, neither Ramsey, Chang, nor the combination thereof teaches or suggests, inter alia, determining a point of zero transmural pressure when the amplitude of the filtered signal is at maximum, and determining a pressure based at least in part from the point of zero transmural pressure. Therefore, Claim 26 is allowable over the cited art. Applicants respectfully request withdrawal of the rejection of Claim 26 under 35 U.S.C. § 103.

New Claim 27

New Claim 27 has been added to more fully define the Applicants' invention, and is believed to be fully distinguished over the prior art of record. Claim 27 recites a method of determining blood pressure of a patient comprising: detecting a signal indicative of an oscillation along an artery; and determining a point of zero transmural pressure from an amplitude maximum of said detected signal.

None of the cited art teaches, inter alia, detecting a signal indicative of an oscillation along an artery and determining a point of zero transmural pressure from an amplitude maximum of said detected signal. Therefore Claim 27 is patentable over the cited art, and the Applicants respectfully request allowance of Claim 27.

Request For Telephone Interview

In view of the forgoing, the present application is believed to be in condition for allowance, and such allowance is respectfully requested. If further issues remain to be resolved, the Applicants' undersigned attorney of record hereby formally requests a telephone interview with the Examiner. The Applicants' attorney can be reached at (949) 721-2946 or at the number listed below.

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Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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Dated: DEC 15, 2004

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